NATIONAL TRANSPORTATION SAFETY BOARD

Office of Research and Engineering
Washington, DC

Medical Factual Report

March 7, 2018

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Chief Medical Officer

A. ACCIDENT: WPR17FA013; Pittsburg, CA

On October 25, 2016, about 1220 Pacific daylight time, a Textron Aviation Beech A36 Bonanza, N364RM, was destroyed when it impacted powerlines and terrain in a steep descent shortly after departure from Buchanan Field Airport (CCR), Concord, California. The private pilot/owner and the certificated flight instructor (CFI) received fatal injuries. The personal flight was conducted under the provisions of Title 14 Code of Federal Regulations Part 91. Visual meteorological conditions prevailed.

B. GROUP IDENTIFICATION

No group was formed for the medical evaluation in this accident.

C. DETAILS OF INVESTIGATION

1. Purpose

   This investigation was performed to evaluate the pilot for any medical conditions, the use of any medications/illicit drugs, and the presence of any toxins.

2. Methods

   The FAA medical case review, autopsy reports, toxicology findings, and the investigator's reports were reviewed.

   Pilot/Owner

   FAA Medical Case Review

   According to the FAA medical case review, the 67 year old male pilot had reported 1775 total hours of flight experience as of his last aviation medical exam, dated 5/26/2015.At that time, he was 72 inches tall and weighed 225 pounds. He had reported hypertension and high cholesterol to the FAA, treated with valsartan and atorvastatin, respectively. These

medications are not considered impairing. He had also reported the removal of a skin cancer. No abnormalities were identified on the physical examination and he was issued a third class medical certificate limited by a requirement to wear corrective lenses for near and distant vision.

Autopsy

According to the autopsy performed at the request of the Office of the Sheriff - Contra Costa County, Coroner's Division, the cause of death was multiple blunt force injuries. The examination was limited by the degree of fragmentation of the body; there was no brain or heart to examine.

Toxicology

Toxicology testing performed by NMS labs at the request of the Contra Costa County, Coroner's Division identified 57 ng/g of pseudoephedrine in liver tissue.

Toxicology testing performed by the FAA's Bioaeronautical Sciences Research Laboratory identified atorvastatin and valsartan in liver. In addition, bupropion and a metabolite were detected in liver and muscle.

Pseudoephedrine is a sympathomimetic often used to treat nasal congestion. It is available from behind the counter and is commonly marketed as Sudafed. It is not generally considered impairing.

Bupropion is a prescription antidepressant that is also indicated for use as an aid to smoking cessation. Common other names are Wellbutrin and Zyban. It carries a boxed warning about risk of significant neurocognitive effects and the potential for suicidality. There is also a dose dependent risk of seizure with this drug.[1]

FAA Blue Ribbon Medical File

Review of the pilot's complete FAA blue ribbon file did not identify a primary care physician or psychiatrist who might have prescribed the bupropion. No records could be obtained regarding the reason for the pilot's use of bupropion or the status of any mental health issues.

Certified Flight Instructor (CFI)/Passenger

FAA Medical Case Review

According to the FAA medical case review, the 58 year old male CFI had reported 7,703 total hours of flight experience as of his last aviation medical exam, dated 3/17/2016.At that time, he was 67 inches tall and weighed 145 pounds. He had reported no chronic medical conditions and

[1] National Institutes of Health. US National Library of Medicine. DailyMed. Bupropion extended release. https://dailymed.nlm.nih.gov/dailymed/drugInfo.cfm?setid=c192f7bf-f38c-0f11-bd14-61f3e8e3bc28 Accessed 3/7/2018.

no use of any medications to the FAA. No abnormalities were identified on the physical examination and he was issued a first class medical certificate limited by a requirement to have available glasses for near vision.

Autopsy

According to the autopsy performed at the request of the Office of the Sheriff - Contra Costa County, Coroner's Division, the cause of death was multiple blunt force injuries. The examination was limited by the degree of fragmentation and thermal injury of the body; there was no brain or heart to examine.

Toxicology

Toxicology testing performed by NMS labs at the request of the Contra Costa County, Coroner's Division identified 0.074 gm% of ethanol in liver tissue.

Toxicology testing performed by the FAA's Bioaeronautical Sciences Research Laboratory identified 0.010 gm% of ethanol in muscle but no ethanol in liver.

Ethanol is the intoxicant commonly found in beer, wine, and liquor. It acts as a central nervous system depressant. After ingestion, at low doses, it impairs judgment, psychomotor functioning, and vigilance; at higher doses it can cause coma and death. Ingested alcohol is distributed throughout the body; as a result, levels from different post mortem tissues are usually similar. Ethanol may also be produced in body tissues by microbial activity after death; this often results in post mortem results that vary widely.[2]

D. SUMMARY OF MEDICAL FINDINGS

The 67 year old male pilot had reported hypertension and high cholesterol to the FAA, treated with valsartan and atorvastatin, respectively. These medications are not considered impairing.

According to the autopsy performed at the request of the Office of the Sheriff - Contra Costa County, Coroner's Division, the cause of death was multiple blunt force injuries. The examination was limited by the degree of fragmentation of the body; there was no brain or heart to examine.

Toxicology testing performed by NMS labs at the request of the Contra Costa County, Coroner's Division identified 57 ng/g of pseudoephedrine in liver tissue. Toxicology testing performed by the FAA's Bioaeronautical Sciences Research Laboratory identified

[2] Federal Aviation Administration. Forensic Toxicology Drug Information. Ethanol. http://jag.cami.jccbi.gov/toxicology/DrugDetail.asp?did=60 Accessed 12/02/2016

atorvastatin and valsartan in liver. In addition, bupropion and a metabolite were detected in liver and muscle.

The 58 year old male CFI/Passenger had reported no chronic medical conditions and no use of any medications to the FAA.

According to the autopsy performed at the request of the Office of the Sheriff - Contra Costa County, Coroner's Division, the cause of death was multiple blunt force injuries. The examination was limited by the degree of fragmentation and thermal injury of the body; there was no brain or heart to examine.

Toxicology testing performed by NMS labs at the request of the Contra Costa County, Coroner's Division identified 0.074 gm% of ethanol in liver tissue. Toxicology testing performed by the FAA's Bioaeronautical Sciences Research Laboratory identified 0.010 gm% of ethanol in muscle but no ethanol in liver. Ethanol is the intoxicant found in beer, wine, and liquor but may also be produced in post mortem tissues by bacterial action.